CONTENTS—Proceedings Vol. 38, 1942

(From September 1941 JOURNAL)

American Concrete Institute Publications Policy 1

The Influence of Vibration, Consistency, and Grading of Aggregate upon the Design of Concrete 9
By G. W. HUTCHINSON
Discussion (from June 1942 JOURNAL) ..... 28–1 to 16

A Concrete Failure Attributed to Aggregate of Low Thermal Coefficient 29
By J. C. PEARSON
Discussion (from June 1942 JOURNAL) ..... 36–1 to 28

Bond Stress in Concrete Pull-Out Specimens 37
By DAVID WATSTEIN
Discussion (from June 1942 JOURNAL) ..... 52–1 to 4

Temperature Effects Near Concrete Surfaces as Affected by Heat Liberation of Cement 53
By LOUIS R. FORBRICH

Tests of Reinforced Concrete Beams with Recommendations for Attaining Balanced Design 65
By KENNETH C. COX
Discussion (from June 1942 JOURNAL) ..... 80–1 to 12

Job Problems and Practice 81

38–73 **Reinforcing for Concrete Masonry Walls** 81
38–74 **Bars to Resist Bond Failures** 82
38–75 **Concrete Laundry Tray Manufacture** 82
38–76 **Simple Method of Estimating Percentage of Sand** 83

Current Reviews 85

(From November 1941 JOURNAL)

Proposed Recommended Practice for Measuring, Mixing and Placing Concrete 93
Report of Committee 614, LEWIS H. TUTHILL, Chairman
Discussion (from June 1942 JOURNAL) ..... 120–1 to 4

A Vacuum Method of Measuring the Air Content of Fresh Concrete 121
By GEORGE L. PIGMAN

A Study of the Cause of Nonuniformity in the Compressive Strength of Concrete Pavement Cores 133
By V. L. GLOVER
Discussion (from June 1942 JOURNAL) ..... 148–1 to 12

Design Diagrams for Square Concrete Columns Eccentrically Loaded in Two Directions 149
By PAUL ANDERSEN
Discussion (from June 1942 JOURNAL) ..... 164–1 to 4

Some Experience with Prestressed Steel in Small Concrete Units 165
By R. E. DILL

Concrete Specifications and Water Content of Concrete 169
By S. J. WARBERG

Proposed Recommended Practice for Use of Metal Supports for Reinforcement 173
Report of Committee 319, WILLIAM F. ZABRISKIE, Chairman

Machine Methods for Trimming Subgrade and Placing Concrete Canal Lining 177
By O. G. BODEN

Job Problems and Practice 181

38–77 **A Comparison of Reinforced Concrete Tied Column Formulas** 181
38–78 **Aluminum Powder to Increase Bond of Concrete to Reinforcing Steel** 183
38–79 **Effect of Aluminum Powder on Durability of Concrete** 184
38–80 **Time Interval Between Successive Coats of Stucco** 184

Current Reviews 185

From January 1942 JOURNAL)

Proposed Recommended Practice for the Design of Concrete Mixes 193
Report of Committee 613, R. F. BLANKS, Chairman
Discussion (from June 1942 JOURNAL) ..... 208–1 to 24

California Experience with the Expansion of Concrete through Reaction between Cement and Aggregate 209
By THOMAS E. STANTON, O. J. PORTER, L. C. MEDER and ALLEN NICOL
Discussion (from *Supplement* to November 1942 JOURNAL) ... 236–1 to 40

Observations on the Durability of Dry Tamped Silo Staves 237
By C. A. HUGHES and KENNETH A. ANDERSON
Discussion (from *Supplement* to November 1942 JOURNAL) ... 252–1 to 12

Absorptive Form Lining 253
By E. N. VIDAL and R. F. BLANKS
Discussion (from June 1942 JOURNAL) ..... 268–1 to 4

Transit Mixers Used Effectively on the Contra Costa Canal 269
By O. G. BODEN

Job Problems and Practice 273

38–81 **Fabricating and Erecting Column Forms** 273
38–79 **Effect of Aluminum Powder on Durability of Concrete** 274
38–82 **Research Man's Troubles** 275
38–83 **How to Prevent Efflorescence** 275
38–84 **Some Details in Designing and Mixing Concrete** 276
38–85 **"Pops" in Slag Concrete** 278

(From February 1942 JOURNAL)

Saving Steel in Reinforced Concrete Design 281
By R. L. BERTIN
Discussion (from April 1942 JOURNAL and from *Supplement* to November 1942 JOURNAL) ..... 288–1 to 40

Architectural Concrete on the New Naval Medical Center 289
By HUGO C. FISCHER

Proposed Specification for Cast Stone 313
Report of Committee 704, C. G. WALKER, Chairman
Discussion (from June 1942 JOURNAL and from *Supplement* to November 1942 JOURNAL) ..... 316–1 to 12

Good Practice in Concrete Masonry Wall Construction 317
By KENNETH C. TIPPY
Discussion (from *Supplement* to November 1942 JOURNAL) ... 328–1 to 16

The Effect of Belt Transportation on Concrete Aggregate Grading 329
By GORDON L. WILLIAMS

The Effect of Change in Moisture Content on the Creep of Concrete under a Sustained Load 333
By GERALD PICKETT
Discussion (from *Supplement* to November 1942 JOURNAL) .... 356–1 to 4

Job Problems and Practice 357

38–86 Bond of Flat Steel Reinforcing 357
38–87 Concreting in the Rain 358
38–88 Slag Aggregate—Wet or Dry 359
38–89 What Concrete Coverage to Protect Reinforcing 360
38–90 Practical Specifications for Structural Concrete 361
38–91 The Shrinkage of Concrete 363
38–92 Why the Limitation on Extreme Fiber Stress 364

Current Reviews 365

Technical Progress Section 373

(From April 1942 JOURNAL)

President's Address 421
By BEN MOREELL

Early Concrete Volumn Changes and Their Control 425
By M. A. SWAYZE

Progress in the Long-Time Study of Cement Performance in Concrete 441
By F. R. MCMILLAN

Canal Lining Cured by Sprayed Coats of White-Pigmented Compound 449
By O. G. BODEN

Earthquake Stresses in Frame Structures 453
By ROBERT E. GLOVER
Discussion from *Supplement* to November 1942 JOURNAL) .... 472–1 to 12

Job Problems and Practice 473

38–93 Causes and Control of Bleeding 473
38–94 Reinforcing 12-in. Walls of Airplane Motor Test Building 474
38–95 Use of Mud Jack in Strengthening Concrete Pavement 475
38–96 The ACI Code's Test Load Requirement 476
38–97 Adopting the ACI Code by Reference 477
38–98 Determining Cement Content of Hardened Concrete 477
38–99 Computing Stirrup Spacing in Non-rectangular Shear Diagrams 478

Current Reviews 481

(From June 1942 JOURNAL)

The Nature of Portland Cement Paints and Proposed Recommended Practice for Their Application to Concrete Surfaces 485
Report of Committee 616, R. E. COPELAND, Chairman

The Properties of Lightweight Structural Concrete Made with Waylite Aggregate .. 505
By GEORGE W. WASHA and KURT F. WENDT
Discussion (from *Supplement* to November 1942 JOURNAL)...520–1 to 4

Job Problems and Practice 521

38–100 Concrete Curing Compound—Made on the Job 521
38–101 Concrete of the Future 523
38–102 Placing Cold Concrete in Hot Weather 524
38–103 Evaluating "n" 525
38–104 Determining Reinforcement in Hardened Concrete 527
38–105 A Formula and a Diagram for the Spacing of Stirrups 528

Current Reviews 533

(From Supplement to November 1942 JOURNAL)

ACI Manual of Concrete Inspection (Separate publication July 1941) Discussion 541

Index Proceedings 581

Index Current Reviews 581